

**REMARKS/ARGUMENTS**

Claims 1 - 24 remain pending in the application.

Claims 19 - 24 have been withdrawn from consideration.

Claims 1, 5, 6, 7, 10, 15, 16 have been amended in order to avoid the 35 U.S.C. 112 objections and also to incorporate the Examiner's suggestions.

The Examiner's objection in paragraph 8 to claims 8 and 17 is not understood because such language does not appear in these claims.

The rejection of 35 U.S.C. 112, second paragraph, is respectfully traversed. The Examiner contends that the recitation of "a decision engine" and "a scheduler" is not disclosed throughout the entire specification regarding its implementation as being a hardware functional entity or a software functional entity or a combination.

Paragraph 0017 of the specification reads as follows:

[0017] In accordance with an aspect of the present invention there is provided an apparatus for providing priority queuing to packets at a network device in a communications network, comprising: a decision engine, at the network device, for receiving packets from the communications network and queuing each of the packets into an available queue wherein  $n$  queues shall be available and  $n \geq 2$ , in dependence upon a source address of the packet; and a scheduler for de-queuing packets from the queues for transmission to the network device wherein packets from the queues are de-queued at different rates depending on a level of trust associated to the source addresses. The higher the trust in the addresses the higher the rate at which the packets are de-queued from the given queue.

Moreover, paragraph 0021 describes Figure 2 as: "Figure 2 illustrates a physical embodiment of the solution." And, finally, Figure 2 is described in text in paragraph 0028. However, it is clear from the specification and drawings that the invention may be carried out in hardware or software or a combination of the two.

The rejection of claims 1 and 10 and their dependent claims under 35 U.S.C. 101 on the ground that the claimed subject matter may be interpreted as not being limited to any hardware is respectfully traversed.

The preamble of claim 1 calls for:

An apparatus for providing priority queuing to packets at a network device in a communications network....

Hence, the Examiner is incorrect in stating that claim 1 does not call for at least one hardware element.

Claim 10 likewise is in proper format in that it calls for:

A method of providing priority queuing to packets at a network device in a communications network, the method comprising...

and then recites two detailed steps. These detailed steps parallel apparatus claims but in method language.

Reconsideration of this ground of rejection is respectfully  
requested.

## Double Patenting

As to the rejection of claims 1 - 18 on the ground of double patenting under 35 U.S.C. 101 as claiming the same invention as copending the application "10/712,103," this is the serial number

of the present application. It is assumed that the Examiner intends to refer to Serial No. 10/440,233. This ground of rejection is believed to have been avoided by the amendments to claims 1 and 10 so that they clearly are not claiming the same invention as claimed in application Serial No. 10/440,233.

### Prior Art Rejections

The rejection of claims 1 and 2 and 10 and 11 under 35 U.S.C. 102(b) as being anticipated by Gai et al (US 6,167,445) (hereinafter Gai) is respectfully traversed.

Paragraphs 0012 and 0013 of the instant specification provide a description of prior art solutions of proposals to mitigate the effect of computer viruses which search networks for vulnerable hosts. Some solutions as described in paragraph 0012 examine the destination or host rather than the source addresses of packets and are not specifically designed to be network based. Another prior art solution examines the source addresses of all IP packets, each source address which appear more than a predetermined number of times and they keep the source addresses of all the packets which appear at least a predetermined number of days. The source addresses fulfilling at least one of these two conditions are defined as "good" packets.

The Examiner asserts that in Gai the traffic management controller 512 is the equivalent of applicant's decision engine and that scheduler 522 is the equivalent of applicant's scheduler.

This is not the case. As amended in claims 1 and 10, applicant's decision engine is located at the network device and is for:

...receiving packets from the communications network and queuing each of the packets in a selected queue, wherein  $n$  queues having respective levels of priority are available and  $n \geq 2$ , in dependence upon a source address of the packet having a level of trust associated to the source addresses corresponding to the priority level of the selected queue;

Moreover, the scheduler for de-queuing the packets such that the packets are:

...de-queued at different rates according to the respective priorities of the n queues, whereby packets with source address recognized to be legitimate are serviced at a higher rate than packets with unknown source address or whose legitimacy is still to be proven.

In Gai, all that is said about traffic management controller 512 and scheduler 522 is as follows:

The traffic management controller 512, which includes a policy rule decoder 514, is coupled to several components and mechanisms. In particular, traffic management controller 512 is coupled to a packet/frame classifier 516, a traffic conditioner entity 518, a queue selector/mapping entity 520 and a scheduler 522. The traffic conditioner 518 also includes several sub-components, including one or more entering entities 514, one or more marker entities 526 and one or more shaper/dropper entities 528. The queue selector/mapping entity 520 and scheduler 518 operate on the various queues established by router 318 for its ports and/or interfaces, such as queues 530a-530e corresponding to an interface 532. (Col. 10, lines 22-34.)

This is not the same or equivalent of applicant's system.

The rejection of claims 3 - 6, 8, 9, 12-15, 17, 18 under 35 U.S.C. 103(a) as being unpatentable over Gai in view of Brock et al (US Pat. Pub. 2003/0110393) (hereinafter Brock) is respectfully traversed. As shown above, Gai fails to teach the invention in the

independent claims 1 and 10 and thus fails to support this obviousness rejection.

Likewise, the rejection of claims 7 and 16 under 35 U.S.C. 103(a) as being unpatentable over Gai in view of Brock and Devarakonda et al (US Pat. Pub. 2001/0052024) is respectfully traversed for the same reasons. Gai fails to teach the functionality of applicant's decision engine and scheduler as spelled out in the claims.

In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,

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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.